

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of:

Unlicensed National Information Infrastructure
(U-NII) Devices in the 5 GHz Band

)
)
)
)
)
)
)

ET Docket No. 13-49

**REPLY COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL**

The National Public Safety Telecommunications Council (NPSTC) submits these reply comments in response to the Commission’s Public Notice seeking to refresh the record on potential sharing solutions between proposed Unlicensed National Information Infrastructure (U-NII) devices and Dedicated Short Range Communications (DSRC) in the 5.850-5.925 GHz band.¹ As addressed in these reply comments, NPSTC highlights some public safety use cases for DSRC intelligent vehicle-to-roadside or vehicle-to-vehicle operations. NPSTC also reiterates its recommendation that the Commission consider enacting protocols which require a UNII device at a given place and time to attempt accessing segments of the 5 GHz band outside the DSRC spectrum first, if sharing is implemented. U-NII operations already are allocated 580 MHz of spectrum at 5 GHz outside the DSRC band. In contrast, the 5.850-5.925 GHz band under consideration for sharing is the only spectrum allocated for DSRC operations.

¹ The Commission Seeks to Update and Refresh the Record in the “Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band” Proceeding, ET Docket No. 13-49, DA 16-68 released June 1, 2016.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 16 organizations serve on NPSTC's Governing Board:

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- Association of Fish and Wildlife Agencies
- Association of Public-Safety Communications Officials-International
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Emergency Managers
- International Association of Fire Chiefs
- International Municipal Signal Association
- National Association of State Chief Information Officers
- National Association of State Emergency Medical Services Officials
- National Association of State Foresters
- National Association of State Technology Directors
- National Council of Statewide Interoperability Coordinators
- National Emergency Number Association
- National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland

Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office for Interoperability and Compatibility, and the SAFECOM Program); Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, Communications Technology Program). Also, Public Safety Europe is a liaison member. NPSTC has relationships with associate members: The Canadian Interoperability Technology Interest Group (CITIG) and the Utilities Technology Council (UTC), and affiliate members: The Alliance for Telecommunications Industry Solutions (ATIS), Open Mobile Alliance (OMA), Telecommunications Industry Association (TIA), TETRA Critical Communications Association (TCCA), and Project 25 Technology Interest Group (PTIG).

NPSTC Reply Comments

The Commission's Public Notice seeks to refresh the record on potential sharing solutions between proposed Unlicensed National Information Infrastructure (U-NII) devices and Dedicated Short Range Communications (DSRC) in the 5.850-5.925 GHz band. One of the specifics requested in the Public Notice was sample use cases. NPSTC believes the following are some of the public safety mobility use cases that DSRC systems can support, if they are free from interference:

- A public safety agency could send a warning message to motorists to detour around a major incident. This would involve a roadside-to-vehicle alert.
- A public safety vehicle such as a fire truck, ambulance or police car travelling on an interstate or major highway to an incident could warn motorists in its path that it is approaching. This would involve a vehicle-to-vehicle alert.
- A public safety vehicle could warn other public safety vehicles, e.g., an alert between two fire trucks approaching the same intersection from different directions. This would involve vehicle-to-vehicle communications.

- Assistance with vehicle crash reporting. We note that countries in Europe are requiring model 2017 vehicles to be equipped with traffic crash sensor technology.

The comments submitted by a coalition of public safety organizations involved in the emergency medical services, fire services and law enforcement noted similar types of use cases for DSRC:

This DSRC technology will improve mission critical mobility for all public safety organizations. Ambulances, police cars, fire trucks, and other emergency vehicles could alert others to their presence and assert priority while in transit to an incident. The first responder community would greatly benefit from expansion of the use of real-time signal prioritization (pre-emption) enabled by DSRC. Other applications, such as incident scene pre-arrival guidance and alerts of potentially scene-encroaching traffic, would enhance responder safety.²

Overall, the comments submitted in this proceeding also indicate a committed investment by Federal, state and local governments, together with industry, based on the DSRC spectrum allocation and rules enacted by the Commission. California Department of Transportation (CALTRANS) “...has invested more than \$50 million to improve the safety and mobility of vehicles with vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) serving as the foundation for these improvements.”

³ In describing one of its several testbed projects, CALTRANS indicated it is planning to expand from 11 consecutive signalized intersections to 135 intersections, a corridor of about 130 miles with an additional \$10 million in investment by the state.⁴ The Michigan Department of Transportation has partnered with the U.S. Department of Transportation, the Road Commission of Oakland County and the University of Michigan to operate approximately 130 roadside DSRC units with a partner investment of \$30 million to date and \$40 million of additional investment planned over the next five

² Comments submitted by a coalition comprised of the National Association of State EMS Officials, International Association of Fire Chiefs, National Sheriffs’ Association, National Association of EMS Physicians, International Association of EMS Chiefs, National Association of EMS Educators, and the Paramedic Foundation.

³ Comments of the State of California Department of Transportation (CALTRANS) at page 4.

⁴ CALTRANS comments at page 6.

years.⁵ The Port Authority of New York and New Jersey indicated it is spending “tens of millions of dollars” in intelligent transportation systems, given that 250 million vehicles cross the Hudson River each year using Port Authority Bridges and Tunnels.⁶

Comments of the American Association of State Highway & Transportation Officials (AASHTO) included a summary of DSRC projects, with the investment made and the status for each project. This information shows the engagement of state and local governments based on the DSRC allocation and rules enacted by the Commission. These projects span across the country. They include existing or planned DSRC operations supported by a mix of local, state, Federal and industry funding. The areas noted in the AASHTO comments include the following:

Maricopa County, Arizona
Fairfax and Blacksburg, Virginia
Washoe County, Nevada
Palo Alto, California
Salt Lake City, Utah
Pittsburgh, Pennsylvania
Eastern Idaho
I-70 Mountain Corridor, Colorado
Portland and Mt. Hood, Oregon
New York City
Tampa, FL
I-80 across Wyoming

The Commission allocated the DSRC spectrum in 1999 and adopted rules for its operation and licensing 5 years later in 2004.⁷ The time it has taken since 2004 to develop and prove out DSRC technology is actually a benefit to the public, not an indication the spectrum is not needed. Who

⁵ Comments of the Michigan Department of transportation at page 1.

⁶ Comments of the Port Authority of New York and New Jersey at page 1.

⁷ Public Notice at page 3.

would want communications to/from his or her vehicle that can impact the safety of a vehicle's occupants to be deployed without comprehensive development and thorough testing?

The comments from public safety, state and local governments, and industry participants who ultimately will be held accountable for the reliability and safety of DSRC communications are absolutely clear: Sharing should be pursued only if it can be done without compromising current and prospective DSRC operations. The Commission should move forward with spectrum sharing only if comprehensive testing in real world scenarios confirm that such sharing can be accomplished without risking interference to DSRC operations.

In addition, if the Commission does move forward to allow U-NII operations in the DSRC spectrum, NPSTC reiterates its recommendation that the Commission seriously consider requiring a protocol that would ensure U-NII devices first use some of the 580 MHz of spectrum at 5 GHz it already has allocated, before encroaching on the DSRC spectrum at 5.850-5.925 GHz.

Conclusion

DSRC technology has tremendous potential to enhance safety for the motoring public, including that of firefighters, law enforcement officials and emergency medical personnel heading to an incident to help save a life. However, this potential can be realized only if the DSRC spectrum is not subjected to interference by unlicensed operations. Accordingly, NPSTC supports comprehensive testing that incorporates real-world situations. The results of such testing should be obtained before any decision is made on spectrum sharing in the DSRC band. Should the Commission decide to move forward with U-NII sharing in the DSRC spectrum, NPSTC reiterates its recommendation that the Commission seriously consider whether a sharing protocol could include a provision for U-NII devices first to attempt access to segments of the 5 GHz band outside the DSRC

spectrum. As noted previously, DSRC has only the 75 MHz of spectrum at 5.850-5.925 while unlicensed U-NII operations already enjoy 580 MHz of spectrum allocated throughout the 5 GHz band.

Ralph A. Haller, Chairman

A handwritten signature in black ink, appearing to read "Ralph A. Haller", written over a horizontal line.

National Public Safety Telecommunications Council
8191 Southpark Lane, Suite 205
Littleton, Colorado 80120-4641
866-807-4755

July 22, 2016